Issue 144
Aug 2024
Division of Technical Resources
Office of Research Facilities
National Institutes of Health
Technical News BULLETIN

Review vs Approval: Construction Submittals

Introduction

Construction submittal documents (which may include shop drawings, material samples, engineering calculations, product cutsheets, mockups, vendor information, material data sheets, warranties, guarantees, diagrams, etc.) are a means of communicating how the contractor intends to achieve the design intent as conveyed by the approved-for-construction documents. Reviewing construction submittals can often be a meticulous and time-consuming process, but it is critical to ensure conformance to the relevant specifications, design drawings, and other approved-for-construction documents. The construction contractor performs the initial review and is generally responsible for ensuring count, dimensional coordination, sequence with other work, existing conditions, compatibility with other work, and other factors that are reviewed as part of the contractor's independent quality control process. This is followed by subsequent review by the Architect/Engineer (A/E) of Record and other NIH reviewers (including professional staff, users, and contracted independent consultants). Per contract language and liability, the A/E is responsible for technical conformance review of construction submittals. Other NIH parties provide review focused on conformance with design intent, including functionality, maintainability, operability, reliability, etc.

Review Practices

The contractor must provide the initial review and approvals of all submittals, followed by the A/E of record, who is responsible for compliance with the construction documents. It is preferable to wait until the A/E of record has reviewed the submittals before beginning NIH review, though project timelines often demand parallel review by the NIH. In all cases, NIH reviewers must exercise care to not give direction to the contractor, unless delegated with such authority by the Contracting Officer (CO). Reviewers must also be cautious to avoid unintentionally transferring risk from the A/E and construction contractor to the Government. To mitigate this risk, the Federal Acquisition Regulation includes a clause that states that "approval by the CO shall not relieve the contractor from responsibility for errors or omissions"[6]; regardless, avoid creating approval language which confuses the distribution of risk as defined by the contract or which may be used in a manner that appears to alter the contract. The proper tool for resolving this type of condition is the change order process, managed by the CO.

NIH reviewers should compare the submittal to the approved-for-construction specifications and other documents, identifying and commenting on any deviations (e.g., discrepancies, inconsistencies, etc.) from the specifications, applicable regulations, quality, fitness for use, function, compatibility, reliability, maintainability, etc. Reviewers should also consider ensuring the provision of all operational and maintenance clearances. Overall, look for whether the submittal appears fit for the intended purpose. Catching potential problems early in the submittal process can save time, money, and potential maintenance headaches.

Submittal Review vs Approval

Although NIH reviewer comments should generally seek to avoid transferring risk to the Government, there are instances where selection and/or approval by NIH representatives is required, such as:

Submittals Requiring A/E Approval: The most typical submittal type, where the A/E of Record or their designee is responsible for a Quality Control (QC) level of review of the proposed product and selected options (e.g., material of construction, finishes, functions, etc.) against the approved-for-construction documents (i.e., specifications having determinative authority, supplemented by the calculations, drawings, basis of design, etc.). In this case, NIH reviewers are responsible for a Quality Assurance (QA) review, ensuring adequate QC by the Contractor and the A/E and conformance with applicable codes, regulations, standards, and the contract.

Submittals Requiring Government Selection: These submittals are subject to QC review by the contractor and A/E, but additionally require limited approval of selections (e.g., color, style, etc.) from a range of products of types which meet predetermined acceptance criteria. Though the contract language typically identifies such selections as requiring CO approval, this is generally delegated to the Contracting Officer's Representative (COR) or to a Project Officer (PO), and these selections are often deferred to the end user of the project. These selections should be of a nature that conveys little to no risk to the government.

Submittals Requiring Government Approval: Some projects involve specialized equipment or systems in which neither the A/E or contractor has expertise or are of a level of criticality which demands government acceptance. In such cases, the contract will generally specify the need for that government approval. In these cases, the NIH user is often a subject matter expert (SME) or is advised by a contracted, external SME. The government should be identified in the contract language as narrowly responsible for approval of submissions related to this item. To defray the risk the government assumes in this case, QC reviews by the contractor and A/E are required. These reviews are often supplemented by factory and site acceptance testing, commissioning, testing, and in some cases qualification to ensure compliance with predetermined acceptance criteria, including fitness for purpose and reliability requirements.

Conclusion

Reviewing submittals is a complex task, but one which is essential for ensuring NIH receives the quality of work it needs from our contractors. However, it is critical to ensure that risk is not unintentionally transferred to the NIH in this process.

References & Further Reading

1. Atkins, J., & Simpson, G. (2006, May). AIArchitect, May 12, 2006 - Best Practices | According to Hoyle: The Submittal Process. Aia.org. https://info.aia.org/aiarchitect/thisweek06/0512/0512bp_risk.htm
2. Friedlander, M. (2000, November). Shop Drawing “Approval” Liability. Consulting - Specifying Engineer; Consulting – Specifying Engineer. https://www.csemag.com/articles/shop-drawing-approval-liability/
3. Kenneth M. Elovitz. (2003, January 3). A Guide to Shop Drawings: Who Should Review? Consulting - Specifying Engineer; Consulting – Specifying Engineer. https://www.csemag.com/articles/a-guide-to-shop-drawings-who-should-review/
4. O’Beirne, K. (2021, March 2). Shop Drawings and Submittals: Definition, Purpose, and Necessity. www.csiresources.org. https://www.csiresources.org/blogs/kevin-obeirne-pe-fcsi-ccs-ccca-cdt1/2020/12/01/shop-drawings-and-submittals-definition-purpose-an
5. Quatman, W. (2020, January 6). Shop drawing liability. Zweig Group; The Zweig Letter. https://zweiggroup.com/blogs/news/shop-drawing-liability#:~:text=When%20the%20shop%20drawing%20isSource two
6. FAR 52.236-21, Specifications and Drawings for Construction (1997). https://www.acquisition.gov/far/52.236-21